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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/698,213	10/30/2000	James D. McIninch	04983.0220.00US00/38-10(1	6072

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ARNOLD & PORTER
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WASHINGTON, DC 20004-1206

EXAMINER

SMITH, CAROLYN L

ART UNIT	PAPER NUMBER
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1631

27

DATE MAILED: 08/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

09/698,213

Applicant(s)

MCININCH, JAMES D.

Examiner

Carolyn L. Smith

Art Unit

1631

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 12 August 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 4 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☒ The proposed amendment(s) will not be entered because:
- (a) ☒ they raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☒ they raise the issue of new matter (see Note below);
- (c) ☒ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☒ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____.

Claim(s) objected to: _____.

Claim(s) rejected: 1-16 and 41-44.

Claim(s) withdrawn from consideration: _____.

8. ☐ The proposed drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☐ Other: _____

Continuation of 2. NOTE: Applicants state the amendments to the claims can be found on page 17 (lines 17-20), page 18 (lines 11-15), page 21 (line 1) through page 26 (line 26), page 46 (line 1) through page 48 (line 10), and Example 2. Amended claims 1-4, 6-11, 13, 16, 41-44 have been amended to include the term "selected" which is not supported in the passages of the specification listed, supra. The specification states a single nucleotide, such as on page 21, line 8, but it makes no mention of whether this nucleotide was selected or randomly chosen. Therefore, this term is considered NEW MATTER.

Claims 1, 7, 8, 43, and 44 have been amended to include the phrase "wherein said bias function does not have the same value in all of said states for said selected nucleotide" which is not fully supported in the cited specification passages listed above. The scope of the claims is broader than the support found in the specification. For example, as stated on page 21, lines 1-6, bias can be the value of one for at least one state and a value other than one for at least one state. However, this does not provide written support that the function does not have the same value in all of said states, which can be reasonably interpreted to mean all values must be different. Thus, this phrase is considered NEW MATTER.

Continuation of 5. does NOT place the application in condition for allowance because: If the Amendment had been entered, Applicants would have overcome several, but not all, 35 U.S.C. 112, second paragraph rejections. The rejections that are maintained under 35 U.S.C. 112, first and second paragraphs, are reiterated below.

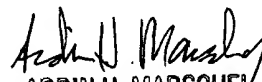
The rejection of claims 1-16 and 41-44 would be maintained under 35 U.S.C. 112, first paragraph, as not being adequately enabled for equations besides the initial oligonucleotide probability, transition probability, nucleic acid sequence probability, and probability for each state for the nucleic acid sequence (equations I-IV on pages 21-24, respectively). Due to the unpredictability of generating probability values and not knowing whether other computational means suitably support the method of the instant invention, only the above-mentioned computational means of the four probabilities are enabled. Applicant states a single specie is all that is required to sufficiently support enablement. This is found unpersuasive in the instant invention due to the unpredictability of the art where unpredictable factors exist. Thus, the specification does not sufficiently enable the full scope of the instant claims.

The rejection of claims 3 and 11 would be maintained under 35 U.S.C. 112, second paragraph. Applicant states that " $\Phi(f)$ " does not cancel itself out in the equations as stated in claims 3 and 11 because they correspond to a function and can have different numerical values corresponding to different elements in the set of states. This is found unpersuasive as the equations appear to cancel themselves out, regarding $\Phi(f)$. As stated in the previous Office action, Applicant is invited to use subscripts or some other form of notation to clarify the differences of this symbol in the numerator and denominator of the equations so that they no longer cancel themselves out.

The rejection of claims 3 and 11 would be maintained under 35 U.S.C. 112, second paragraph. Applicant states one of ordinary skill in the art would understand that f , S , P_f , P_i , and Φ correspond to terms, or parts of terms, of a mathematical equation. While a skilled artisan would be aware of the general mathematical equation correspondence of the terms, the terms' exact definitions are unclear as Applicant appears to be relying heavily on art-defined and not specification defined methods. Therefore, exact definitions of these terms are requested for the claims in order to clarify the metes and bounds of these terms.

The rejection of claims 1, 4, 5, 7-9, 12, 13, 15, and 41-44 under 35 U.S.C. 102(b) would require further search for "applying a bias function" (i.e. claims 1, 8, and 41-44) after the elimination of NEW MATTER. The confusion of " $\Phi(f)$ " canceling itself out in equations 3 and 11 is maintained.

Although some rejections would have been overcome, partial entry, that is, of only certain sections of an After Final amendment is generally not performed. Due to the presence of NEW MATTER, this After Final amendment will not be entered at this time.


ARDIN H. MARSCHEL
PATENT EXAMINER